Amendments to the Claims:

1. (Currently amended) A method for visualization of real world data by displaying a plurality of ~~point~~ points in a phase space, the method comprising the steps of, for each point:

(a) providing a ~~first~~ sequence of ~~first~~ data samples corresponding to the real world data measured in relation to a dimension;

(b) calculating and storing with an electronic processor a single volatility of the ~~first~~ sequence ~~of first data samples~~;

(c) scaling and storing with the electronic processor the volatility with a factor, the factor being dependent on the length of the ~~first~~ sequence;

(d) calculating and storing with the electronic processor a net change in the data as a difference between ~~an initial first data sample and a last data sample of the first sequence,~~ data samples within the sequence, in accordance with the formula:

$R_{t,t+1}(p) = \ln(p_{t+1}) - \ln(p_t) \approx \frac{p_{t+1} - p_t}{p_t}$, where t is a dimension and p is a data value;

(e) determining and storing with the electronic processor a first and a second coordinate value of a point in phase space based on the volatility and the ~~difference~~ net change[[,]]; and

(f) ~~displaying~~ providing as an output of the electronic processor a display of the point in phase space.

2. (Currently amended) The method of claim 1 wherein the factor is related to the square root of the length of the ~~first~~ sequence.

3. (Currently amended) The method of claim 1 wherein the ~~sequence of data samples are ordered in a discrete time series~~ real world data is selected from data pertaining to members of the group consisting of: stocks, stock options, bonds, currency exchange rates, microeconomic values, macroeconomic values, stock exchanges, personal stock portfolios, turnover, return on net asset, inflation rate, unemployment, sports, science, opinion polls, sports team performance, technology, physical experiments, and sociology; and

wherein said dimension is selected from the group consisting of: time, length, energy, and speed.

4. (Currently amended) The method of claim 1 comprising the further steps of:

(g) providing and storing with the electronic processor a probability distribution of the net change in data for a plurality of points ~~differences of consecutive data samples of the first sequence~~;

(h) providing and storing with the electronic processor a probability threshold value; and

(i) determining and storing with the electronic processor a sub-space of the phase space ~~in which the point is situated with a probability equal to the probability threshold value, the determination of the sub-space~~ based on the probability distribution and the probability threshold value.

5. (Original) The method of claim 4 wherein the probability distribution is a gaussian distribution.

6. (Currently amended) The method of claim [[5]] 4 wherein the probability threshold value is equal to one of the volatility and the volatility times an integer value.

7. (Original) The method of claim 4 wherein the sub-space has the form of one of a cone and the projection of a cone.

8. (Withdrawn) The method of claim 1 wherein each of the data samples are correlated to a price value and the difference is correlated to a return.

9. (Withdrawn) The method of claim 1 wherein each data sample is an intraday price fixing.

10. (Currently amended) The method of claim 1 further comprising ~~displaying~~ providing as an output of the electronic processor a display of a symbol on a location of a display unit corresponding to the first and second coordinate value.

11. (Currently amended) The method of claim [[10]] 4 further comprising the step of ~~displaying~~ providing as an output of the electronic processor a display of a boundary ~~line~~ of the sub-space ~~on the display~~.

12. (Original) The method of claim 10 comprising the further step of displaying a number of K frames FRj, each of the frames FRj visualizing one of a corresponding set of points p0 to pi and a sub-set of the set of points.

13. (Currently amended) The method of claim ~~12 comprising the further step of gradually~~ 1, wherein providing as an output of the electronic processor a display includes decreasing the brightness and/or contrast of ~~a point of the~~ points ~~being~~ previously displayed~~, the decrease being inversely proportional to the index value of the point~~.

14. (Withdrawn) The method of claim 1 wherein the first sequence covers an intraday period.

15. (Withdrawn) The method of claim 1 further comprising

g) defining a hierarchical tree structure, the tree structure providing an index structure for accessing a database; and

h) providing a plurality of sequences each composed of data samples,

i) storing said plurality of sequences of data samples, the data samples being ordered in a time series, and each of the sequences being associated with a leaf of the hierarchical tree structure.

16. (Original) The method of claim 15 wherein each of the leaves of the hierarchical tree structure points to a set of sequences associated with a specific entity, the sequences of said set of sequences covering different time intervals.

17. (Withdrawn) The method of claim 15 wherein the database contains a plurality of files, each file storing a predefined set of sequences with the set of sequences stored in each file being associated with a specific distinct entity and being accessible by an identifier of the specific distinct entity.

18. (Withdrawn) The method of claim 17 wherein the specific distinct entity is a predetermined group of stock values, a stock portfolio or a stock or other financial index.

19. (Original) The method of claim 15 wherein the data samples are input into the database in real time with a predetermined delay.

20. (Withdrawn-Previously presented) The method of claim 15 further comprising

j) storing a number of user defined portfolios which are retrievable by a key;

k) retrieving sequences of data samples corresponding to a user defined portfolio upon a user request by querying the database;

l) providing the user with the sequences of data samples;

m) updating the sequences of data samples at regular time intervals; and

n) discontinuing the updating process when a user has failed to perform an action during a predefined time interval.

21-22. (Canceled)

23. (Currently amended) A client computer system for computing and storing with an electronic processor a point in a phase space, the client computer system comprising:

a) a sequencer for deriving a ~~first~~ sequence of ~~first~~ data samples of real world data;

b) a calculator for determining a single volatility of the ~~first~~ sequence of ~~first~~ data samples and a net change in the data as a difference between ~~an initial first data sample and a last data sample of the first sequence~~ data samples within the sequence, in accordance with the formula:

$R_{t,t+1}(p) = \ln(p_{t+1}) - \ln(p_t) \approx \frac{p_{t+1} - p_t}{p_t}$, where t is a dimension and p is a data value;

c) a scaler for scaling the calculated volatility with a factor dependent on the length of the first sequence;

d) a plotter for determining a first and a second coordinate value of a point in a phase space based on the volatility and the difference; and

e) a display for displaying the point as an output of the electronic processor in a phase space ~~based~~.

24. (Currently amended) The client computer system of ~~claims~~ claim 23 further comprising a second plotter for determining a sub-space of the phase space in which the point is situated with a probability being equal to a predetermined probability value, the determination of the sub-space being made responsive to the predetermined probability value and a probability distribution.

25. (Currently amended) A computer program product for visualization of real world data comprising a computer readable medium encoded with computer executable instructions storable with an electronic processor, for performing the steps of:

i) reading a ~~first~~ sequence of ~~first~~ data samples from a server computer;

ii) calculating a single volatility of the ~~first~~ sequence of ~~first~~ data samples;

iii) scaling the volatility with a factor dependent on the length of the first sequence;

iv) calculating a net change in the data as a difference between ~~an initial first data sample and a last data sample of the first sequence~~ data samples within the sequence, in accordance with the formula:

$R_{t,t+1}(p) = \ln(p_{t+1}) - \ln(p_t) \approx \frac{p_{t+1} - p_t}{p_t}$, where t is a dimension and p is a data value; and

v) determining a first and a second coordinate value of a point in phase space based on the volatility and the difference[[.]];

wherein steps (i)-(v) are repeated to enable an output of the electronic processor of a display of the ~~point~~ points in phase space.

26. (Original) A computer readable medium having computer executable instructions for performing the steps recited in claim 1.

27. (Original) A server computer system comprising a computer program product according to claim 26 for downloading and execution by a client computer system.

28. (New) A method for visualization of financial data in a phase space, the method comprising the steps of:

(a) providing a plurality of sequences of data samples, each corresponding to the financial data over time, and

(b) for each of said at least one sequences:

(i) calculating a single volatility of the sequence;

(ii) scaling the volatility with a factor, the factor being dependent on the length of the sequence;

(iii) calculating return as a difference between data samples within the sequence, in accordance with the formula:

$R_{t,t+1}(p) = \ln(p_{t+1}) - \ln(p_t) \approx \frac{p_{t+1} - p_t}{p_t}$, where t is a time value and p is a data value;

(iv) determining a first and a second coordinate value of a point in phase space based on the volatility and the return; and

(v) displaying the point in phase space using a medium selected from the group consisting of: computer display, printed media; and

(c) for a plurality of said plurality of sequences of step (b):

(i) calculating a probability distribution of the calculated return values;

(ii) providing a probability threshold value; and

(iii) defining a sub-space of the phase space based on the probability distribution and the probability threshold value; and

(iv) enabling the visualization of the sub-space on the medium selected.

29. (New) The method of claim 1, wherein calculating a single volatility in step (b) includes use of the formula $\overline{\sigma_{t_0,t_1}(p)} = \frac{1}{\sqrt{t_1 - t_0 - 1}} \sqrt{\sum_{t=t_0}^{t_1-1} (\overline{R_{t_0,t_1}(p)} - R_{t,t+1}(p))^2}$,

wherein $R_{t,t+1}(p) = \ln(p_{t+1}) - \ln(p_t) \approx \frac{p_{t+1} - p_t}{p_t}$; and

wherein $\overline{R_{t_0,t_1}(p)} = \frac{1}{t_1 - t_0} \sum_{t=t_0}^{t_1-1} \ln(p_{t+1}) - \ln(p_t)$.